### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Yes

No

N/A

Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 1.28

# WELDING INSPECTION REPORT

Resident Engineer: Casey, William **Report No:** WIR-026453 Address: 333 Burma Road **Date Inspected:** 28-Sep-2011

City: Oakland, CA 94607

**Project Name:** SAS Superstructure **OSM Arrival Time:** 700 **OSM Departure Time:** 1730 Prime Contractor: American Bridge/Fluor Enterprises, a JV

Contractor: American Bridge/Fluor Enterprises, a JV **Location:** Job Site

**CWI Name:** See Below **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A **Qualified Welders:** Yes No N/A **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No

**Delayed / Cancelled:** 

**Bridge No:** 34-0006 **Component:** Tower & OBG

## **Summary of Items Observed:**

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the SAS project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed as noted below:

## A). Tower Shear Plates, ESW

The QAI observed the continued repair welding, Visual Testing (VT) and the Magnetic Particle Testing (MPT) on the Electro-Slag Weld (ESW) shear plate to the tower shaft skin plate connections located at the joints "J", "K", "E" and "F". The welding was performed by Richard Garcia ID-5892 utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specification (WPS) ABF-WPS-D15-1000 Repair, Rev. 2. The inspection and testing were performed by John Pagliero who also used the WPS as a reference to monitor the welding and verify the welding parameters. There were several areas marked by QC for additional grinding to remove linear indications that were found utilizing the MPT method. This work was not completed during this shift.

#### B). Document Control Review

This QA Inspector continued the daily review of field inspection reports and update of the field document control tracking records regarding the Orthotropic Box Girders (OBG, Longitudinal and Transverse "A" Deck Stiffeners, Deck Access Holes and the Tower Shear plates. The QAI also updated the tracking records for the pipe welds and the pipe supports.

# WELDING INSPECTION REPORT

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On this date the QAI commence the review of QA tracking documents for the OBG's identified as E3, E4 and E5.

## **QA Summary**

The welding was performed in the vertical position utilizing the E7018-H4R. The 3.2 mm H4R electrodes were stored in a electrically heated, thermostatically controlled oven after the removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

## **Summary of Conversations:**

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes, Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer